



612.34893VV3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants: DULLIEN et al  
Serial No.: 09/872,010  
Filed: June 4, 2001  
For: Process And Device For Eliminating The Particles  
Contained In A Stream Of Fluid  
Art Unit: 1724  
Examiner: Charles Bushey

REPLY BRIEF

Mail Stop: Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

March 15, 2004

Sir:

Appellants are submitting this Reply Brief under 37 CFR 1.193(b)(1), in triplicate, in response to the Examiner's Answer mailed January 16, 2004.

All of the appealed claims require a flow channel or passage in which the fluid stream flows in turbulent flow. Appellants submit the Examiner has not properly interpreted the phrase "turbulent flow" as used in the subject application. Moreover, appellants submit that the flow in the separator of "Britain 632,360" is not turbulent flow.

Appellants have provided on the record what the Examiner has deemed a "text book definition" of turbulence (Exhibit A attached to Appellants' Amended Brief). Appellants have also provided additional evidence of the meaning of the

phrase "turbulent flow" (see the letter dated July 3, 2002 from distinguished Professor Emeritus Dullien to Mr. Jean-Paul Nguyen attached to Appellants' Amended Brief as Exhibit B). The Examiner dismisses appellants' interpretation of the phrase "turbulence." In particular, the Examiner alleges on page 7 of the Examiner's Answer that "appellant's arguments are based upon a textbook definition of 'turbulence', which is not commensurate in scope with that as set forth by the instant application." The Examiner's reasoning is in error.

During examination, the words of the claims must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ 2d 1320, 1322 (Fed. Cir. 1989). In other words, the words of the claims must be read as they would be interpreted by those of ordinary skill in the art. Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342, 60 USPQ 2d 1851, 1854 (Fed. Cir. 2001). See, also, Manual of Patent Examining Procedure (MPEP) Section 2111.01.

Appellants' specification does not provide a definition of "turbulent flow." Therefore, this phrase must be given its plain meaning and must be interpreted as it would by those of ordinary skill in the art. Appellants submit one of ordinary skill in the art would interpret the phrase "turbulent flow" to mean a fluid motion in which velocity, pressure and other flow quantities fluctuate irregularly in time and space and in which eddy patterns are complex and flow quantities (including vorticity) fluctuate randomly in time and three-dimensional space. See Exhibits A and B attached to Appellants' Amended Brief.

The Examiner also alleges as follows:

The application only requires that the turbulent flow within the claimed device include "eddies" or "vortices". There is no mention or suggestion within the instant application that the so-called turbulent flow include eddy patterns which are complex in flow quantities which fluctuate randomly in time and space.

However, the mention of "eddies" and "vortices" is appellants' specification is consistent with the plain meaning of the phrase "turbulent flow" as it would be interpreted by those of ordinary skill in the art. That is, turbulent flow includes eddies, i.e., eddy patterns which are complex, and vortices, i.e., flow quantities (including vorticity) which fluctuate randomly in time and three-dimensional space. There is no requirement that appellants provide a definite in their specification of terms which are known to those of ordinary skill in the art unless they wish the terms to have a special definition.

Since appellants' specification does not define the term "turbulent flow," it must be interpreted to have its plain meaning as it would be understood by those of ordinary skill in the art. Appellants have provided evidence of the plain meaning of the term which is consistent with its use in the subject application.

For the foregoing reasons, the term "turbulent flow" must be interpreted to mean a fluid motion in which velocity, pressure and other flow quantities fluctuate irregularly in time and space and in which eddy patterns are complex and flow quantities (including vorticity) fluctuate randomly in time and three-dimensional space). The present invention requires a flow channel or passage in which fluid stream flows in "turbulent flow." Britain 632,360 does not disclose a device including a flow channel for a fluid stream in "turbulent flow."

For the foregoing reasons and the reasons set forth in Appellants'

Amended Brief, the final rejection should be reversed.

To the extent necessary, appellants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, Deposit Account No. 01-2135 (Case: 612.34893VV3), and please credit any excess fees to said deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP



Alan E. Schiavelli  
Registration No. 32,087

AES/jla  
(703) 312-6600